## REMARKS

Claims 51-76, 79-81, 84-92, 95 and 97 are pending in this application. Claims 51-76, 79-81, 84-92, 95 and 97 have been rejected. Claims 51, 59, 66, 67, 73, 79, 86 and 97 have been amended. Claims 57 and 90 have been canceled. No new matter has been added by this amendment. Reconsideration is respectfully requested in light of the following remarks and amendments.

**I. Rejection under 35 U.S.C. 102(a)/103(a)**

Claims 51-76, 79-81, 84-92, 95 and 97 remain rejected under 35 U.S.C. 102(a) as anticipated by or in the alternative under 35 U.S.C. 103(a) as obvious over Gusev et al. (1999) *J. Chromatography,* pg. 273-290. The claims are suggested to read on Gusev et al. and it would have been obvious to optimize the elements of Gusev et al. to enhance separation.

Claims 57-58 and 66 also remain rejected under 35 U.S.C. 103(a) as being unpatentable over Gusev et al. in view of Peters (U.S. Patent No. 5,929,214) for the reasons of record. The Examiner acknowledges that Gusev et al. fail to teach channels sufficiently large to allow convective flow; however, Peters discloses large channels allowing for convective flow and high flow rates through a monolith.

Claim 91 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Gusev in view of Girot (U.S. Patent 6,045,697). It is acknowledged that Gusev et al. do not recite the use of a tetrahydrofuran porogen; however, Girot discloses that tetrahydrofuran is a suitable porogen.

Claim 95 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Gusev, in view of either Huber ((1998) *Anal. Chem.* 70:5288-95) or Griffey ((1997) *J. Mass. Spec.* 32:305-13). It is suggested that the claim differs from Gusev in reciting use of a mass spectrometer. It is suggested that Huber discloses electrospray mass spectrometry and Griffey discloses that electrospray mass spectrometry is a gentle sensitive method of analysis.

Claims 51-66, 71, 73-76, 79-81, 84-85 and 95 remain rejected under 35 U.S.C. 103(a) as being unpatentable over either Frechet U.S. Patent No. 5,334,310) or Hatch (U.S. Patent No. 6,238,565) in view of Peters ((1997) *Anal. Chem.* 69:3646-49), Huang ((1997) *J. Chromatography* 788:155-64) and Tomer ((1994) *Mass. Spec. Rev.* 13:431-57) for the reasons of record.

Claims 67-70 and 72 remain rejected under 35 U.S.C. 103 (a) as being unpatentable over either Frechet or Hatch in view of Peters and Huang for the reasons of record.

Claims 86-92 and 97 remain rejected under 35 U.S.C. 103 (a) as being unpatentable over either Frechet or Hatch in view of Peters and Tomer for the reasons of record.

Claims 57-58 and 66 remain rejected under 35 U.S.C. 103(a) as being unpatentable over either Frechet or Hatch in view of Peters, Huang and Tomer as applied to claims 51-66, 71, 73-76, 79-85 and 95 above, and further in view of Peters (Patent '214) for the reasons of record.

Claim 91 remains rejected under 35 U.S.C. 103(a) as being unpatentable over either Frechet or Hatch in view of Peters and

Tomer as applied to claims 86-92 and 97 above and further in view of Girot for the reasons of record.

Claim 95 remains rejected under 35 U.S.C. 103(a) as being unpatentable over either Frechet or Hatch in view of Peters, Huang and Tomer as applied to claims 51-66, 71, 73-76, 79-85 and 95 above, and further in view of Huber or Griffey for the reasons of record.

The Examiner suggests that Applicants' declarations submitted with the response dated March 6, 2006 and March 25, 2004 fail to overcome Gusev (1999) *J. Chromatography* 273-290 and Hatch (U.S. Patent No. 6,238,565) as references because the declarations were not signed by all inventors as required by MPEP 715.04; and the declaration dated March 25, 2004 does not state that the work was performed in a U.S., a NAFTA country or a WTO country. It is further suggested that the evidence submitted is insufficient to establish Applicants' actual reduction to practice because the Examiner suggests that there is no indication that the monolith was in a fused silica tube having a diameter in the range of 1 to 1000 micrometers, the chromatographic surfaces were non-polar, or that the matrix was underivatived.

Applicants respectfully disagree with these rejections.

To facilitate the prosecution of the present application, Applicants respectfully submit herewith a Declaration signed by all the inventors of the instant invention, wherein said Declaration indicates that the work disclosed in the Declaration was performed in Innsbruck, Austria, a recognized WTO member country and demonstrates that Applicants had actively reduced to practice the present invention prior to the effective date of Gusev and Hatch. In the enclosed Declaration, Applicants describe the successful

synthesis of a PS/DVB monolith (an underivatized matrix with non-polar chromatographic surfaces) using decanol and tetrahydrofuran as porogens and separation of oligonucleotides using this monolith. Moreover, the last page of the experimental results submitted with the Declaration demonstrate that prior to the effective date of Gusev and Hatch, Applicants employed a 6 cm TSP025375 column (*i.e.*, a fused silica tube available from Polymicro Technologies having an inner diameter of 25 µm and outer diameter of 363 µm, see Applicants' response dated March 6, 2006) for chromatographically separating $dT_{12}$ to $dT_{18}$ oligonucleotides in monolith (see page header and graphs). As such, Applicants had actively reduced to practice the use of a polymeric monolith in a fused silica tube having an inner diameter in the range of 1 micrometer to 1000 micrometer prior to the effective date of both Gusev and Hatch and therefore these references are not proper prior art references under 35 U.S.C. 102(a).

Further, it is respectfully pointed out that while the Examiner has pointed to the deficiencies in Applicants' Declarations of March 25, 2004 and March 6, 2006 as applied to Gusev and Hatch, the Examiner has failed to provide a rationale for maintaining the rejections of claims 51-76, 79-81, 84-92, 95 and 97 as being unpatentable over the primary reference of Frechet in view of Applicants' arguments of record filed March 6, 2006. "Where the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it." MPEP 707.07(f).

In any event, the combined teachings of the cited references do not teach or suggest each and every limitation of the pending claims as required under 35 U.S.C. 102(a)/103(a). In particular,

Applicants disclose and draw claim to polymeric monoliths which are *non-porous* or are *devoid of micropores*. See the embodiments set forth in claims 57, 66 and 90. Applicants find no such teaching or suggestion in the prior art references which forms the basis for the rejection of these claims. In fact, the cited references of Gusev, Peters, Frechet, Hatch, Tomer and Huang specify the *presence of micropores*. In particular, Gusev teach that median pore radius for a monolithic sample prepared therein is about 5 micrometers (see page 282, column 1, lines 3-6); Peters discloses that "preferred polymer moonlights are characterized by possessing a bimodal pore distribution, containing both large generally micrometer-sized convective pores and much smaller diffusion pores" (see column 4, lines 34-38); Frechet specifically teach that the monolith disclosed therein has a "portion of the porosity provided by large pores having diameters greater than about 600 nm up to about 3,000 nm" (see column 4, lines 56-58); Hatch discloses monoliths with pores of less than 5,000 nm, but of at least 1 micron (see column 8, lines 1-11); and Huang and Tomer are silent to pore size. As such, the cited references do not teach or suggest a monolith which is *non-porous* or *devoid of micropores*. Thus, in an earnest effort to highlight the porosity, or lack thereof, of the instant monoliths, claims 51, 59, 66, 67, 73, 79, 86 and 97 have been amended to recite monoliths which are devoid of micropores or are non-porous. Because this amendment is supported by the embodiments set forth in claims 57 and 90, and in part claim 66, claims 57 and 90 have been canceled. Given that the primary references of Gusev and Hatch are not proper prior art references under 35 U.S.C. 102(a) and the combined teachings of the cited

references fail to teach or suggest each and every limitation of the instant claims, these references cannot be held to make the present invention obvious. It is therefore respectfully requested that the rejections under 35 U.S.C. 102(a)/103(a) be reconsidered and withdrawn.

**II. Conclusion**

Applicants believe that the foregoing comprises a full and complete response to the Office Action of record. Accordingly, favorable reconsideration and subsequent allowance of the pending claims is earnestly solicited.

Respectfully submitted,



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